

BLACKHAWK



Army ACAT IC Program

Total Number of Systems:	1530
UH-60A:	911
UH-60L:	619
UH-60Q:	357
UH-60L+:	918
UH-60X:	255
Total Program Cost (60L) (TY\$):	\$11.5B
Average Unit Cost (60L) (TY\$):	\$6.41M
Full-rate production:	
UH-60A:	4QFY82
UH-60L:	2QFY88
UH-60Q:	2QFY02
UH-60L+:	3QFY03
UH-60X:	2QFY04*

Prime Contractor

Sikorsky Aircraft
General Electric

* Currently Unfunded

SYSTEM DESCRIPTION & CONTRIBUTION TO JOINT VISION 2010

The UH-60 BLACK HAWK is a single rotor medium-lift helicopter that provides utility and assault lift capability in support of a wide range of missions. The BLACK HAWK is the primary helicopter for air assault, general support, and aeromedical evacuation. Additionally, BLACK HAWK's can be configured to perform command and control, electronic warfare, and special operations missions.

The versatility of this widely used aircraft provides significant *dominant maneuver* and *focused logistics* capabilities.

BACKGROUND INFORMATION

The Army began fielding the UH-60A in 1978. Over ten years, the Army procured about 1050 UH-60A model aircraft. A 1989 power train upgrade resulted in a model designation change from UH-60A to UH-60L. Since 1989, the Army has procured over 500 of the newer UH-60L models but has not modernized the previously fielded UH-60A models. Eight newly modified aeromedical evacuation aircraft, UH-60Q/HH-60L, have recently been procured, out of a total requirement of 357. Procurement of 55 more UH-60L BLACK HAWK's is funded through FY02-05 in the FY00 President's Budget submittal.

Since the first UH-60A models have over 20 years in service, a modernization program is being developed to begin in FY02. This effort, known as UH-60L+, is intended to extend the service life and modernize the entire UH-60 A/L/Q fleet to a common configuration. The UH-60L+ program is intended to add a Force XXI digitized cockpit, reduce fleet operating and support costs, improve fleet reliability and maintainability, and begin with modernizing the aging UH-60A aircraft.

A new Operational Requirements Document is under development, which will establish a UH-60X model BLACK HAWK with increased lift, increased range, and improved survivability requirements. The UH-60X aircraft will include a more powerful engine and better aircraft survivability equipment. The new engine is under development and should provide increased shaft horsepower and greater fuel efficiency. Survivability will be enhanced by the installation of the Suite of Integrated Radio Frequency Countermeasures and the Suite of Integrated Infrared Countermeasures.

TEST & EVALUATION ACTIVITY

Funding has not been formally approved for the UH-60L+/UH-60X programs. Funding for BLACK HAWK modernization (FY00 RDT&E) has been made available by Congress but is being withheld by OSD. Nevertheless, the Army held a Test and Evaluation Integrated Product Team meeting in June 1999 to consider operational and live fire test strategies. An Operational Requirements Document is under development that is intended to address operational requirements for both models. The Army is working with DOT&E to develop Critical Operational Issues and Criteria and the Test and Evaluation Master Plan.

There is a significant amount of ballistic test data collected under DOT&E's Joint Live Fire program on early versions of the Black Hawk. DOT&E is currently working with the Army to identify remaining LFT&E requirements for the Black Hawk family of aircraft systems.

TEST & EVALUATION ASSESSMENT

Recent DOT&E experience in programs with comparable objectives (such as the Army's Improved Cargo Helicopter program) show that early involvement of the T&E community can result in a straightforward integrated test strategy. By forming a Test and Evaluation Integrated Product Team early, this program is off to a good start.

From a technical perspective, the primary risk for the UH-60L+ is likely to be aviation avionics. Integration of off-the-shelf components into a digitized Force XXI cockpit will be a challenge. The Army intends to leverage their recent experience in fitting a digital cockpit in the UH-60Q and ICH, and apply lessons learned from USN CH/SH-60, USMC UH-1Y and AH-1Z and commercial efforts.

From an operational test and evaluation perspective, it will be a challenge for the Army to explicitly demonstrate the benefits of the program's digitization component and quantify the reduction of Operation and Support (O&S) costs given a specified tempo of operations and desired availability rate. Demonstrating the benefits of digitization is certainly not unique to the UH-60 Service Life Extension Program or to Army Aviation; all the communities will be working to show the value added by digitized command and control once the technical problems have been solved. The lack of clear requirements and the required degree of integration with the Force XXI Battle Command Brigade and Below are areas of concern. Quantifying the reduction of O&S costs will require a continuous evaluation strategy that encompasses longer periods of time and more flight hours than the traditional IOT&E event.

